

308236

OST-04-16877-109

Comment Form—Cabrillo Port LNG Deepwater Port draft EIS/EIR

DEPT OF TRANSPORTATION
DOCKETS

2004 DEC 15 A 11:33

Name (Please Print): Betty Eagle

Organization/Agency: _____

Street Address: 2037 Majerca Dr.

City: Oxnard State: CA Zip Code: 93035

Email address: www.eagle@rain.org

Please provide written comments in the space below and drop this form into the comment box.

You may also submit comments

- Electronically through the Project Web site at <http://www.cabrilloport.ene.com>
- Electronically through the Docket Management System Web site (docket number 16877) at <http://dms.dot.gov>
- Or by mail or email to following addresses:

Docket Management Facility
Room PL-401
400 Seventh Street SW
Washington, DC 20590-0001

California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825
ogginsc@slc.ca.gov
Attention: Cy Oggins

All comments must be received by 2 p.m. PST, December 20, 2004

Comments (Use other side or attach additional sheets if necessary):

I appreciate the hearing which was held in our town on Nov. 30. But I feel that I had no chance to speak because a number of out of town, (paid) supporters of the LNG were able to speak before the people of the area in question. I left because I'm still recovering from surgery and couldn't stay for my turn which appeared to be coming later. An effort should have been made to

G104-1

No action will be taken until the environmental review process is completed.

G104-1

The notices for the public meetings and the information provided at the public meetings indicated that commenters would speak in the order that their requests were received, after elected officials and representatives of government agencies were heard. We regret that you were unable to stay at the meeting to provide oral testimony; however, your submitted written comment carries the same weight as any oral comments provided at public hearings.

G104-

here from the citizens of the Towns involved.

We chose to move here years ago in order to retire to a mild beautiful coastal town. We are living almost on the shore and love our setting, climate and other aspects of this town.

We are careful to conserve energy in everyway possible and we know our government would rather import energy than invest in renewable energy which would not perhaps ensure the right people.

We don't want to be part of an experiment since this is what is suggested - pipe lines on the ocean floor, a platform off our coast for conversion of liquid to gas etc. - ominous to say the least. Also, disregard for the less affluent members of our town - place the lines so near mobilehome communities & a school

We came here from a small state - Vermont - too cold but our elected officials responded to people when a major concern of this nature arose - We expect the same now - No N.E.C. will be tolerated

You can expect more negatives as people wake up to the dire implications -

Sincerely,
Mrs Betty Eagle

G104-2

Sections 3.3.1 and 3.3.2 address conservation and renewable energy sources, within the context of the California Energy Commission's 2005 Integrated Energy Report and other State and Federal energy reports, as alternatives to replace additional supplies of natural gas.

G104-3

Sections 2.1 and 4.2.7.3 contain information on design criteria and specifications, final design requirements, and regulations governing the construction of the FSRU and LNG carriers.

G104-4

Impacts PS-4 and -5 in Section 4.2.8.4 contain mitigation to reduce the risks to residents along any analyzed pipeline route.

G104-5

Section 4.2.8 contains information on safety requirements for pipelines. Section 4.13.1 discusses the proximity of the proposed pipeline routes to residences and schools.

Your statement is included in the public record and will be taken into account by decision-makers when they consider the proposed Project.

Name (Please Print): Norman Eagle
 Organization/Agency: _____
 Street Address: 2037 Majors Dr.
 City: Oxnard State: CA Zip Code: 93035
 Email address: eagle@rain.org

Please provide written comments in the space below and drop this form into the comment box.

You may also submit comments

- Electronically through the Project Web site at <http://www.cabrilloport.ene.com>
- Electronically through the Docket Management System Web site (docket number 16877) at <http://dms.dot.gov>.
- Or by mail or email to following addresses:

Docket Management Facility
 Room PL-401
 400 Seventh Street SW
 Washington, DC 20590-0001

California State Lands Commission
 100 Howe Avenue, Suite 100-South
 Sacramento, CA 95825
 ogginsc@slc.ca.gov
 Attention: Cy Oggins

All comments must be received by 2 p.m. PST, December 20, 2004

Comments (Use other side or attach additional sheets if necessary): _____

I am opposed to the placement of this
LNG system in the Oxnard/Ventura CA area.
This is a highly populated area (400,000), too
densely populated to experiment with a NEW
and UNTESTED energy delivery system.
We have not seen any evidence that other,
SAFER, areas along the coast, have been
studied sufficiently. Surely along a 1,500 mile

G493-1

G493-2

G493-3

G493-4

No action will be taken until the environmental review process is completed.

G493-1

Your statement is included in the public record and will be taken into account by decision-makers when they consider the proposed Project.

G493-2

Section 3.3.7 contains information on the specific California locations considered in the alternatives analysis. The deepwater port would be 12.01 nautical miles (13.83 miles) offshore, as shown on Figure ES-1.

G493-3

Sections 2.1 and 4.2.7.3 contain information on design criteria and specifications, final design requirements, and regulations governing the construction of the FSRU and LNG carriers.

G493-4

The EIS/EIR initially evaluated 18 locations for the FSRU as potential locations for the deepwater port. It built on previous California Coastal Commission studies that evaluated nearly 100 locations. Section 3.3.7 contains information on other locations that were considered.

G493-4
cont'd

in CA, OR, WA
 Coast line. You can find areas ~~where~~ of
 low population density. There are
 several areas in this project where the
 proposed pipe line virtually will run
 directly below or extremely close
 to existing communities. How
 could anyone sleep under this kind of
 threat, day in and day out?

G493-5

This is an irresponsible proposal
 and must be rejected.

G493-5

Section 4.2.8 contains information on safety requirements for
 pipelines. Section 4.13.1 discusses the proximity of the proposed
 pipeline routes to residences and schools.

RECEIVED
 CALIFORNIA STATE
 LANDS COMMISSION
 2004 DEC 6 PM 12:05

Comment Form—Cabrillo Port LNG Deepwater Port draft EIS/EIR

Name (Please Print): RYAN EMBREE Source: Public Meeting - Malibu
 Organization/Agency: _____ Date: 12/1/2004
 Street Address: 23901 CIVIC CENTER #346
 City: Malibu State: CA Zip Code: 90265
 Email address: _____

Please provide written comments in the space below and drop this form into the comment box.

You may also submit comments

- Electronically through the Project Web site at <http://www.cabrilloport.ene.com>
- Electronically through the Docket Management System Web site (docket number 16877) at <http://dms.dot.gov>.
- Or by mail or email to following addresses:

Docket Management Facility
 Room PL-401
 400 Seventh Street SW
 Washington, DC 20590-0001

California State Lands Commission
 100 Howe Avenue, Suite 100-South
 Sacramento, CA 95825
ogginsc@slc.ca.gov
 Attention: Cy Oggins

All comments must be received by 2 p.m. PST, December 20, 2004

Comments (Use other side or attach additional sheets if necessary): The significant G094-1

damage that would result from a catastrophic failure
is reason enough to deny this project. Because a
worst case scenario must be evaluated, it is an option.
I contend that failure is NOT an option.

G094-1

NEPA does not require "worst-case analysis" but does require the agency to prepare a summary of existing relevant and credible scientific evidence and an evaluation of adverse impacts based on generally accepted scientific approaches or research methods. However, the Independent Risk Assessment (IRA) (Appendix C1) defines and evaluates representative worst credible cases (scenarios of events that would lead to the most serious potential impacts on public safety). These included accidents that would affect one, two, or all three tanks of the FSRU.

As shown in Tables 4.2-1, 4.2-2, 4.2-7, and 4.2-8, the release of the contents of all three tanks (the entire contents of the FSRU and an attending LNG carrier) is addressed in the escalation scenario associated with a large intentional event. Section 4.2.7.6 contains additional information on how intentional events are addressed. Although the 2006 U.S. Department of Energy's Sandia National Laboratories third-party technical review of the 2004 IRA found that the three-tank simultaneous release (a massive LNG release in a short time period) was not credible, Sandia recommended the consideration of a cascading (escalation) three-tank scenario.

No action will be taken until the environmental review process is completed.

Origin: E&E Website
Date: 12/20/2004
First Name: Carrie
Last Name: Emerson
Address: 1908 N. Alder St.
City: Tacoma
State: WA
Zip Code: 98406
Topic: Other/General Comment
Comments: My husband and I are very concerned with the energy shortages we face. We would hate to see blackouts in Washington like you saw in California. A state with the economy like California needs to explore more sources of foreign energy to ease our burden here at home. Thank you for having the foresight to consider projects like Cabrillo Port. These are the steps needed to boost our economy and protect our domestic sources of oil and natural gas.

G323-1

G323-1

Your statement is included in the public record and will be taken into account by decision-makers when they consider the proposed Project.

Origin: E&E Website
Date: 12/20/2004
First Name: Danny
Last Name: Emerson
Address: 1908 N. Alder St.
City: Tacoma
State: WA
Zip Code: 98406
Topic: Other/General Comment

Comments: I have enjoyed living on the west coast for five years now. I understand the beauty and quality of life that draws people out here. With the conflict in the Middle East our relationship with countries providing sources of energy is more important now than ever before. We need to ease the burden of domestic energy and continue to embrace foreign sources of energy. The Cabrillo Port rig provides a much needed way to get natural gas from other countries. These are the sensible solutions we need during these times.

G324-1

Your statement is included in the public record and will be taken into account by decision-makers when they consider the proposed Project.

Origin: E&E Website
Date: 12/16/2004
First Name: Otto
Last Name: Emme
Address: 2290 Via Lucia
City: La Jolla
State: CA
Zip Code: 92037
Phone No.: 858 454 1991
Email: ooemme@san.rr.com
Address:
Topic: Cumulative Impacts Analysis
Comments: IT about time this state and our country lives up providing facilities
needed for energy needs in the future

G058-1

Your statement is included in the public record and will be taken into account by decision-makers when they consider the proposed Project.

Origin: E&E Website
Date: 12/16/2004
First Name: Otto
Last Name: Emme
Address: 2290 Via Lucia
City: La Jolla
State: CA
Zip Code: 92037
Phone No.: 858 454 1991
Email: ooemme@san.rr.com
Address:
Topic: Cumulative Impacts Analysis
Comments: Our state and country needs to realize that our engery consumption continues to grow and thus we need to have the proper facilites that will meet those needs, let s build for the future! otto emme

G305-1

Your statement is included in the public record and will be taken into account by decision-makers when they consider the proposed Project.

Origin: E&E Website

Date: 12/19/2004

First Name: Marc

Last Name: Endrigat

Topic: Land Use

Comments: It seems to me that anything that can keep down the cost of natural gas, and do so in an environmentally sensitive manner, can only be a good thing. As America relies more and more upon this source of energy, a facility like Cabrillo Port seems to make a lot of sense at the same time I don't see too many negative impacts.

G199-1

Your statement is included in the public record and will be taken into account by decision-makers when they consider the proposed Project.

4681 Via Don Luis
Newbury Park, CA 91320
19 December 2004

Source:
USCG Docket

Date: 12/20/04

California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

Gentlemen:

The following are my comments on the draft Environmental Impact Statement / Environmental Impact Report for the Cabrillo Port Liquefied Natural Gas Deepwater Port. The comments are arranged by sections of the report.

Section 4.0

For the most part this of the critique is restricted to a consideration of the worst dangers to life and limb associated with this project. As a consequence, little consideration is given to the pipeline or marine traffic. Pipeline accidents or sabotage will result in very localized damage, and consequently in little loss of life. Likewise, accidents or sabotage associated with marine traffic will endanger few people, although economic loss such as destruction of the FSRU may be considerable.

G428-1

Section 4.2

A. Page 4.2-1 of the EIS/EIR states that "Although the LNG industry has been operating for 40 years, fewer than 20 marine accidents involving LNG have occurred worldwide, none of which resulted in a significant release of LNG."

This is not a valid argument to demonstrate LNG safety. First, the environment will not be the same as in the past; an offshore port is something new; furthermore, we are now subject to attacks by terrorists. Second, past performance is no guarantee of future performance; for example, before the Exxon Valdez incident, more than 8700 laden tankers had safely transited Prince William Sound, where the Exxon Valdez ran aground. Just the cleanup cost for the Exxon Valdez exceeded \$2 billion, and that ignores the cost of damage to the environment.

G428-2

The only safe assumption is that if something can go wrong, it will go wrong, and that must be the basis of any EIS/EIR.

G428-3

B. The same page of the EIS/EIR states that "Evaluating the potential safety impacts from the proposed Project required the use of a structured process that would: ... Make the results available to decision makers and the public, while also ensuring that release of relevant information does not in turn create a security threat."

G428-4

G428-1

Table 4.2-2 identifies representative hazards and threats considered in the public safety analysis. Marine traffic is discussed in Section 4.3.

G428-2

The LNG safety record is part of the environmental baseline. Section 4.2 contains additional information and analyses, including the results of a Project-specific risk assessment.

G428-3

Section 4.2.7.6 and the Independent Risk Assessment (Appendix C1) contain information on public safety impacts from various incidents at the FSRU. The analysis indicates that the maximum impact distance of an accident would involve a vapor cloud dispersion extending 6.3 nautical miles (7.3 miles) from the FSRU. The FSRU would be located approximately 12.01 nautical miles (13.83 miles) offshore; therefore, consequences of an accident involving LNG transport by carrier and storage on the FSRU would extend no closer than 5.7 nautical miles (6.5 miles) from the shoreline. Figure ES-1 depicts the consequence distances surrounding the FSRU location for worst credible events.

G428-4

The IRA was determined to contain sensitive security information (SSI), and it was not made available to the general public; however, it was available for review by Federal, State, and local agency staffs and officials with safety and security responsibilities and clearances. The results of the 2004 IRA were summarized in the October 2004 Draft EIS/EIR.

With the exception of certain SSI in Appendix D, the entire text of the IRA and its supporting documents are included in Appendix C. As noted in the preface to Appendix D (Collision Analysis) to the IRA, "(t)he complete report is available for review by Federal, State, and local agency staffs and elected officials with safety and security responsibilities and clearances."

This statement makes a farce of the EIS/EIR process. The EIS/EIR denies the public access to the very information it requires to evaluate the EIS/EIR. It is ridiculous to deny the public this information on the grounds that release of this information will create a security threat. In fact, not releasing this information may well create a security threat, as the result of a false sense of security. There have been many instances in the past where attempts have been made to deny an enemy information, with only limited success. Russia had the atomic bomb just a few years after us. China, Israel, the Union of South Africa, India, Pakistan, and North Korea all apparently have the atomic bomb, and Iran and South Korea appear to be building one or more. That is only the most egregious example of the futility of trying to prevent the spread of information. Along the same lines, there have been many instances in which a country has placed false faith in cryptography to preserve secret information. Also, the market place is rife with instances of industrial espionage. There will always be instances in which secret information is revealed by careless persons, or by theft, or for money, or for beliefs.

The terrorists are not mentally retarded. They are intelligent and well financed. They can find information posted on the internet. They have sympathizers throughout the United States and the world. They can afford bribes for secure information.

C. On the same page it is stated that "If the license and lease were approved, additional safety evaluations would be conducted throughout the design, construction and operation of the project."

This tells the public nothing. What safety evaluations? Who would conduct them? Who would evaluate them? Would they be available to the public, who are likely to be at risk, and who should be informed?

D. Again, on the same page it is stated that "... since the independent Risk Assessment Report contains sensitive security information (SSI), it cannot be made available to the general public ..."

The draft EIS/EIR is asking the public to be a pig in a poke; that is, to accept the proposed port without knowing what they are accepting. The people of Oxnard and Malibu should not be gullible enough to accept this.

Table 4.2-1

A. Table 4.2.1 is entitled "Public Scoping Comments - Security and Safety Topics".

This table is unsatisfactory. The worst failings are the following, neither of which is addressed:

**G428-4
cont'd**

G428-5

G428-6

G428-7

G428-8

G428-5

Sections 4.2.4, 4.2.7.3, and 4.2.8.2 identify agencies with the authority and responsibility for safety standards, design reviews, and compliance inspections. Section 2.1 and Appendix C3-2 identify applicable safety standards.

G428-6

See the response to Comment G428-4.

G428-7

Table 4.2-1 summarizes public scoping comments, that is, comments made by the public, each of which is addressed in the EIS/EIR.

G428-8

Table 4.2-2 provides information on representative hazards and threats considered in the public safety analysis, including hijacking of the FSRU or an LNG carrier. Section 2.2 of the Independent Risk Assessment (see Appendix C1) contains information on the Security Vulnerability Assessment conducted for the proposed Project. Appendix C3-2 contains information on marine safety and security requirements.

1. Terrorists seizing an LNG carrier, running it close to shore, producing large holes (as large as you wish) in all onboard Moss spheres, producing matching hull holes, and detonating the natural gas at the most opportune time.

2. The same as above, except that it is the FSRU that is freed from its moorings, disconnected from the port to shore pipes, and towed close to shore.

The objective in both instances is to maximize the amount of flammable gas in or above an inhabited area. Neither of these scenarios has been considered.

B. Item 3 of the table addresses the risk of hijacking of the LNG carrier or the FSRU, and refers to Appendix C for more details.

Appendix C, Section 2.1, speaks of preventing or mitigating risks. "Mitigating risks" is too ambiguous a term. To mitigate is to reduce. That is not sufficient. Risks must be eliminated. In considering terrorism scenarios, Appendix C states, "Actual mitigation of those events would be based upon the findings of the Hazard Workshop and its consequence modeling." In other words, only mitigation would be considered, and the necessary study and planning for implementation have not yet been done, and thus are not available for evaluation by the public.

Again quoting from the same section of Appendix C, "A terrorist or criminal group inserting one or more of its members into an employment pool or staff can accomplish infiltration. This procedure may prove more difficult due to most pre-employment background investigations being accomplished by the majority of major employers; and, the increasing level of identifiable threat profiling processes by the Federal Bureau of Investigation (FBI) and other investigative agencies. Affecting a change in a member or members of an employer's staff through indoctrination, threats, blackmail or other means can provide a terrorist or criminal group with a covert agent that might "slip under the radar" due to an employer's trust and familiarization with that person or persons. In addition, that "trusted employee" might have access to security and operations procedures, high-value assets and has achieved full access to the facility. Because of this, it is imperative that an employer conducts periodic investigations of its employees with an awareness of changes in mood, attitude, and/or political, religious, economic or personal attributes."

It should be required that all potential employees be vetted by a police organization, and all employees be periodically be investigated by a police organization. Neither should a passport or any other document be accepted as a means of identification. Further, physical identification of each member of the crew should be required before the LNG carrier is allowed to enter United States waters, not just examination of documents.

C. Item 4 of Table 4.2-1 refers to locating the facility in a less populated area as a topic of public comment, and responds by stating that the FSRU is 14 miles offshore. This response ignores the fact that under terrorist control, an LNG carrier can reach the shore, perhaps even entering the harbor at Port Hueneme.

G428-8
cont'd

G428-9

G428-10

G428-9

Sections 4.2.7.3 and 4.3.1.5 contain information on regulations related to the vessel and FSRU crews. The USCG is responsible for the enforcement of all laws and regulations on U.S.-flagged vessels on the high seas and all vessels within U.S. waters.

G428-10

Table 4.2-2 and Sections 4.2.6.1 and 4.2.7.6 contain information on the threat of terrorist attacks. Again, please see the response to Comment 428-7.

D. Item 9 of the table mentions the possible consequences of errant missiles from the Point Mugu missile test range. The proposed FSRU appears to be situated within about a mile of the boundary of the sea range. While test missiles are equipped to be destroyed by command from the ground if they go astray, this does not always work.

G428-11

E. Item 12 of the table addresses the adequacy of computer modeling for vapor dispersion from a spill. There have been no releases of LNG even as large as an order of magnitude smaller than the modeled spills that can be used to verify the model used. Again, spills from a near-shore tanker are likely more critical than spills from the FSRU.

G428-12

F. The models used for spill modeling are not described in detail, so that the public can not even evaluate the assumptions used or determine whether the assumptions used are those that have been shown in the past to be faulty. Further still, there has been no evidence presented that the model is an error-free implementation of the assumptions. Large error-free computer programs are almost as rare as hens' teeth.

G428-13

Section 4.2.2

A. The risk assessment process for the draft EIS/EIR has depended on congregations of "experts", who have developed "scenarios", and used buzz-word tools such as "frequency analysis", "event tree analysis", "fault tree analysis", and "consequence analysis". In the absence of the relevant details in the draft EIS/EIR, this is a tale told by an idiot, full of sound and fury, signifying nothing, incapable of being evaluated.

Frequency analysis is meaningless unless there are a large number of past events from which to determine reasonably accurate statistics.

G428-14

Event-tree analysis is worthwhile only if all the possible event actions are considered, and, in complicated systems, imagining all possible event actions ranges from difficult to impossible.

G428-15

Fault tree analysis is the mirror image of event-tree analysis. Event tree analysis applies to the actions that may follow an event. Fault tree analysis applies to the actions that may lead to an event. Fault tree analysis is no more likely to be complete than is event tree analysis. It's the things you don't consider that will bite you:

Example 1: On January 27, 1967, a cabin fire killed three Apollo I astronauts while they performed system checks on the launch pad at Cape Canaveral. These deaths resulted because the cabin was filled with pure oxygen, and a spark from an electrical short set insulation of fire. No one anticipated the consequences of an electrical spark in an oxygen rich atmosphere.

Example 2: There was the Apollo 13 moon mission "accident" in 1970, in which an oxygen tank exploded. The crew, luckily, survived. The oxygen tanks had originally been designed to run off the onboard 28 volt power supplies, but were redesigned to also

G428-11

Table 4.2-2 contains revised text on this topic. Section 4.3.4 contains information on potential impacts associated with the increased vessel traffic due to the proposed Project. The FSRU would be located 3.5 NM (3.54 miles) from the eastern boundary of the Point Mugu Sea Range (Pacific Missile Range). Impacts MT-5 and MT-6 in Section 4.3.4 address potential Project impacts on Naval and Point Mugu Sea Range operations.

G428-12

To date, there has never been a large spill of LNG to water. Conducting a large LNG spill to validate the models would result in adverse environmental consequences. However, models are commonly validated using experimental data. Section 2.3.4.2 of Appendix C1 contains information on tests executed by the U.S. Department of Energy and the calibration/verification of the Fire Dynamics Simulator model used in the Independent Risk Assessment. Appendix C1 provides additional information on this topic, and Appendix C2, prepared by the U.S. Department of Energy's Sandia National Laboratories, contains information on the review and assessment of the models used.

Section 4.3 contains information on marine traffic associated with the proposed Project. Under normal operating conditions, the carriers would not be closer to shore than the FSRU, which is located farther from shore than the coastwise traffic lanes.

G428-13

The Independent Risk Assessment (IRA) has been updated since issuance of the October 2004 Draft EIS/EIR. The lead agencies directed preparation of the current IRA, and the U.S. Department of Energy's Sandia National Laboratories independently reviewed it, as discussed in Section 4.2 and Appendix C.

Section 4.2.7.6 and the IRA (Appendix C1) discuss the models and assumptions used and the verification process. Sandia National Laboratories (Appendix C2) concluded that the models used were appropriate and produced valid results.

G428-14

Frequencies provide context for the analysis. Section 4.2.7.6 contains additional information on this topic. Also see the response to Comment G428-3.

G428-15

The Independent Risk Assessment (IRA) has been updated since issuance of the October 2004 Draft EIS/EIR. The lead agencies

directed the preparation of the current IRA, and the U.S. Department of Energy's Sandia National Laboratories independently reviewed it. See Section 4.2, Appendix C1, and Appendix C2 for additional information on third-party verification of the IRA.

run off 65 volt ground power – all except for the heater thermostatic switches that were supposed to keep the tank from overheating. These switches were probably damaged — welded shut — in ground testing. In flight, this probably allowed the tanks to reach 1000°F instead of the intended 80°F. The gauges to show tank temperature were designed only to go to 80°F, so the extreme heating was not noticed.

Example 3: The primary cause of the Exxon Valdez accident previously mentioned was failure to follow established procedures. A secondary cause was that the only officer on the bridge had been on duty for 18 hours.

Example 4: (Not mentioned in the draft EIS/EIR.) On August 19, 2004, at the Moss Bluff storage facility, natural gas was being injected into one of the salt dome gas storage caverns, and brine that otherwise fills the cavern was necessarily being withdrawn through a 8-5/8 inch pipe. The pipe in the cavern broke as a result of unanticipated corrosion, and when the brine level was low enough to allow the gas to reach the break, the "water hammer" resulting from a mixture of gas and brine in the pipe destroyed the wellhead assembly, allowing gas to escape through the 20 inch production casing.

And a lot more examples can be supplied if you wish them.

B. The stated computer modeling assumptions omit the physics of LNG, the ocean, natural gas, and the atmosphere acting in concert, so that evaluation of the modeling is not possible.

C. Summary of computer modeling results. See paragraph B, above.

Section 4.2.4

Risk Evaluation - Offshore and onshore natural gas transportation. I expect the risks to life concomitant with natural gas transportation to be orders of magnitude less than those associated with LNG carriers or the FSRU, as a result of the much smaller area likely to be endangered by a pipeline break. Consequently, I have not addressed these risks.

Section 4.2.6

Regulatory setting: Applicable safety standards and responsibilities. Historically, there are always instances in which established safety standards have been violated or ignored with unfortunate results. People are people. They get tired. They get bored. They get confused. They goof off. They exercise poor judgement. And all of these behaviors result in accidents that prescribed procedures will not prevent. A few of the many examples of this are the Exxon Valdez, Chernobyl, and Three Mile Island.

Table 4.2.8-1

The table is a summary of public safety impacts and mitigation measures

G428-15
cont'd

G428-16

G428-17

G428-16

The Independent Risk Assessment (IRA) has been updated since issuance of the October 2004 Draft EIS/EIR. The lead agencies directed preparation of the current IRA, and the U.S. Department of Energy's Sandia National Laboratories independently reviewed it, as discussed in Section 4.2 and Appendix C.

Section 4.2.7.6 and the IRA (Appendix C1) discuss the models and assumptions used and the verification process. Sandia National Laboratories (Appendix C2) concluded that the models used were appropriate and produced valid results.

G428-17

Sections 4.2.4, 4.2.7.3, and 4.2.8.2 identify agencies with the authority and responsibility for safety standards, design reviews, and compliance inspections. Section 2.1 and Appendix C3-2 identify applicable safety standards.

Let us address just one item in this table to illustrate the problem with the entire table:

Impact

PS-3 There is a potential for fishing gear to become hung up on the pipeline and potentially damage one or both of the subsea pipelines. Similar damage may occur due to a seismic event or subsea landslide (Class I).

Mitigation Measure(s)

AMM PS-3a. Concrete coating expected to add mass and stability in shallower waters. The applicant would ensure that pipelines laid on the sea floor in shallower waters would be concrete-coated, which would provide additional pipeline mass and *increase the likelihood* that the fishing gear would detach from the vessel before it damages the pipeline. (Emphasis added.)

In this instance, as in many other instances, it is not even suggested that the proposed mitigation measure will solve the problem, much less guarantee that it will.

Section 4.2.8.1

On page 4.2-81, the draft EIS/EIR states "The likelihood of potential impacts would be reduced from the estimated annual frequencies of about 6.1×10^{-7} per year ..."

There are many similar statements in the draft EIS/EIR. They are all nonsense. Estimated frequencies of accidents are devoid of meaning unless they are based on statistics of past accidents. Stating that "the likelihood of potential impacts would be reduced from the estimated annual frequencies of about 6.1×10^{-7} per year ..." is equivalent to stating that the mean time between accidents is 1.6 million years. Let's say that accident statistics have been gathered have been gathered for 1.6 million years — orders of magnitude longer than recorded history, and even more orders of magnitude longer than the 40 years of the LNG industry — and that one accident was recorded in this period. Would you be willing to accept that the mean time between accidents was 1.6 million years, or that probability of an accident in any year was 6.1×10^{-7} ? What if no accidents were recorded in that same period? Would you then conclude that the probability of an accident in any one year was zero?

Section 4.2.8.3

This section addresses the location of the odorant facility. It is my belief that so far as onshore safety is concerned, it would be preferable to have both the odorant and metering facilities as part of the FSRU. Should any difficulties occur with the highly flammable odorant, it would be far better to have these occur offshore, where they would endanger fewer people.

G428-18

G428-18

The report has been revised since issuance of the October 2004 Draft EIS/EIR. Following the list of mitigation measures for each potentially significant impact is a summary of whether and how the measure(s) would avoid, prevent, minimize, or compensate for an activity's adverse effects. If the impact would remain significant after mitigation, i.e., continue to exceed the significance criteria, further measures may be proposed, or the impact may be determined to be significant and not mitigable (Class I). Section 4.1.5 provides more information on this topic.

G428-19

Chapter 2.3 of the IRA (Appendix C1) and Section 4.2.6.1 of the EIS/EIR address the risk assessment methodology and frequency analysis for incidents at the deepwater port. Section 4.2.8.1 discusses pipeline incident frequencies. Also see the response to Comment G428-3.

G428-20

The Project has been modified since issuance of the October 2004 Draft EIS/EIR, and the main odorant station has been relocated to the FSRU with a smaller backup odorant facility onshore. Sections 2.4.1.3, 4.2.7, 4.7.4, 4.12, 4.18.4, 6.2.2, and 6.2.3 contain updated text on this topic.

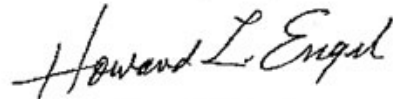
G428-19

G428-20

Section 4.3

Marine Traffic. As stated earlier, I have not concerned myself with marine traffic, inasmuch as I consider the possible endangerment of human lives resulting from a terrorist action much more serious.

Sincerely,

A handwritten signature in cursive script that reads "Howard L. Engel". The signature is written in dark ink and is positioned above the typed name and email address.

Howard L. Engel
engelh@adelphia.net